

## PARALLEL PATTERN DETECTION ENGINE

## ABSTRACT OF THE DISCLOSURE

5 A parallel pattern detection engine (PPDE) comprise multiple processing units (PUs) customized to do various modes of pattern recognition. The PUs are loaded with different patterns and the input data to be matched is provided to the PUs in parallel. Each pattern has an Opcode that defines what action to take when a particular data in the input data stream either matches or does not match the corresponding data being compared during a clock cycle. Each of the PUs communicate selected information so that PUs may be cascaded to enable longer  
10 patterns to be matched or to allow more patterns to be processed in parallel for a particular input data stream.